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09/705,929	11/06/2000	Young-Sun Kim	P56228	7508

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EXAMINER

AWAD, AMR A

ART UNIT	PAPER NUMBER
2675	9

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/705,929

Applicant(s)

KIM, YOUNG-SUN

Examiner

Amr Awad

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,18,29-43 and 47-49 is/are rejected.
- 7) ☒ Claim(s) 2-17,19-28,44-46 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 18, 29-43 and 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hong (US patent NO. 5,706,063; provided by the Applicant) in view of Kunihiro (Japanese patent Publication NO. 10-198320).

As to independent claim 1, Hong (figure 1) teaches a display that includes a first beam splitter passing a first wavelength band of colored light received, and reflecting a second wavelength band of the plurality of colored lights received (col. 2, line 64 through col. 3, line 6). Hong teaches a first panel (LCD panel 37) receiving the first wavelength band of the plurality of colored lights, receiving color data and panel control signals, and outputting first incident light corresponding to the received color data, and a second panel (LCD panel 38) receiving the second wavelength band of the plurality of colored lights, receiving the color data and panel control signals, outputting second incident light corresponding to the received color data in accordance with the panel control signals to display the received color data (col. 3, lines 6-43).

Hong does not teach having the first panel displaying the received color data starting from the most significant bit, and the second panel displaying the received data starting from the least significant bit to the most significant bit.

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However, Kunihiro (figure 1) teaches a liquid display device that includes a first and second display panels (1 and 2) wherein one of the first or second panels receives the display data from the most significant bit and, the other panel receives the display data from the least significant bit (see English abstract, and paragraph 015 of the electronic English translation).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Kunihiro having two display panels which receive data bits opposite to each other, to be included in Hong's device so as motivated by Kunihiro, to be able to provide an LCD display which has no crossover wiring and applicable to chip-on-glass (see problem to be solved in the abstract).

As to independent claim 18, the claim is similar to independent in reciting a first panel for receiving wavelength components of a plurality of colored lights and receiving the color data starting from the most significant bit the least significant bit, and a second panel for receiving different wavelength components of the plurality of colored lights, and receiving the color data starting from the least significant bit to most significant bit. As can be seen above, with respect to the rejection of claim 1 above, these limitations are taught by the combination of Hong and Kunihiro. The claim also recites light unit for emitting a white light and a color switching unit receiving the white light , and separating the white light into a plurality of colored lights. Hong teaches a light source (31) which fairly reads on the claimed limitation of white color (col. 2, lines 64-66 and col. 3, lines

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28-43), and the beam splitter (32) disclosed in Hong's device is fairly equivalent to the color witching unit.

As to independent claim 29, the claim is substantially similar to independent claim 18 adding to it the beam splitter, which is taught by Hong. Therefore, the claim would be analyzed as previously discussed with respect to claim 18 above.

As to claims 30-32, Hong shows having the switching unit outputting each one of the plurality of colored light in accordance with the color switch signals (see figure 4), and wherein the colored lights output from the color switching unit corresponding to red, green and blue lights (col. 3, lines 59-65), and outputting one light while blocking the other color lights (col. 3, lines 59-65).

As to claim 33, as can be seen above, both reference disclose an LCD display devices. Using a Ferro-electric LCD would be obvious to a person of ordinary skill in the art at the time the invention was made because Ferro-electric displays known for its power efficiency and affordability.

As to claim 34, the LCD display is equivalent to electric shutter.

As to claims 35-41, the claims are method claims, which corresponds to apparatus claims 29-34, and would be analyzed as previously discussed with respect to the apparatus of claims 29-34.

As to claims 42-43 and 47-49, the limitations in these claims are all substantially similar to the limitations included either in independent claims 1, 18, 29 and 35, and dependent claim 40, which are rejected above, and would be analyzed as previously discussed with respect to claims 1, 18, 29, 35 and 40 above.

Allowable Subject Matter

3. Claims 2-17, 19-28, and 44-46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

4. Applicant's arguments filed 12/08/2004 have been fully considered but they are not persuasive.

Applicant (page 3) argued that the examiner failed to establish a prima facie case of obviousness because there is no suggestion or motivation to combine. Examiner respectfully disagrees. Examiner submits that the motivation to combine is recited in the Kunihiro's reference. Applicant (page 4) argued that in Kunihiro, two LCDs are arranged in a longitudinal direction or lengthwise, and provides a solution having no crossover wiring of a LCD electrode in such an arrangement, while the two LCDs (37, 38) are not arranged in longitudinal direction or lengthwise, then why should Hong be modified to include Kunihiro teaching. Examiner respectfully disagrees with the rationale provided by the Applicant to show that there is no suggestion or reason to combine the two references. **First**, there are no limitations in the claims directed to the direction of the two LCDs whether horizontal or longitudinal directions. Therefore, the direction of the LCDs shouldn't be an issue in rejecting the claims. **Second**, having the two LCDs (37 & 38) perpendicular to each other in Hong's device or in longitudinal direction in Kunihiro's

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device wouldn't preclude the examiner from combining the two reference because such an arrangement if it is specified in Kunihiro's device; it is not specified in Hong's device.

Third, Kunihiro is not bodily incorporated to Hong's device, but rather the teaching of Kunihiro having two display panels receiving data bits opposite to each other, is to be combined to Hong's device. Therefore, Examiner believes that the combination of Hong and Kunihiro fairly reads on the cited limitations. Examiner disagrees with the Applicant's founding that in Hong's invention, the structural arrangement of the two LCDs of Hong should not be arranged in longitudinal direction or lengthwise because the projection of the black-and-white signal with the LCD color signal can be carried even if the two LCDs are arranged in longitudinal direction.

Applicant (bottom of page 5) argued that Hong and/or Kunihiro taken separately or in combination do not teach or suggest all the claim limitations, because Kunihiro does not teach that one of the first or second panel receives the display panel data from the most significant bit and, the other panel receives the display data from the least significant bit. Examiner respectfully disagrees. As indicated in the rejection above, Kunihiro teaches the cited limitation and the combination fairly reads on the invention as claimed.

Applicant (page 7) argued that the present invention is directed to correcting a false contour, while Hong and Kunihiro do not recognize this problem and does not provide a solution. Examiner respectfully disagrees. **First**, the citation of the false contour correction is provided only in the preamble, and therefore, no significant weight should be given to such limitation. **Second**, even if the two references do not

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specifically states correcting a false contour, the way in which the references are described clearly shows improvement in the displayed image, which in turn fairly reads on the claimed limitations.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amr Awad whose telephone number is (703)308-8485. The examiner can normally be reached on Monday-Friday, between 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras can be reached on (703)305-9720. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4750.

AWR Ahmed A. Wilson

A.A.